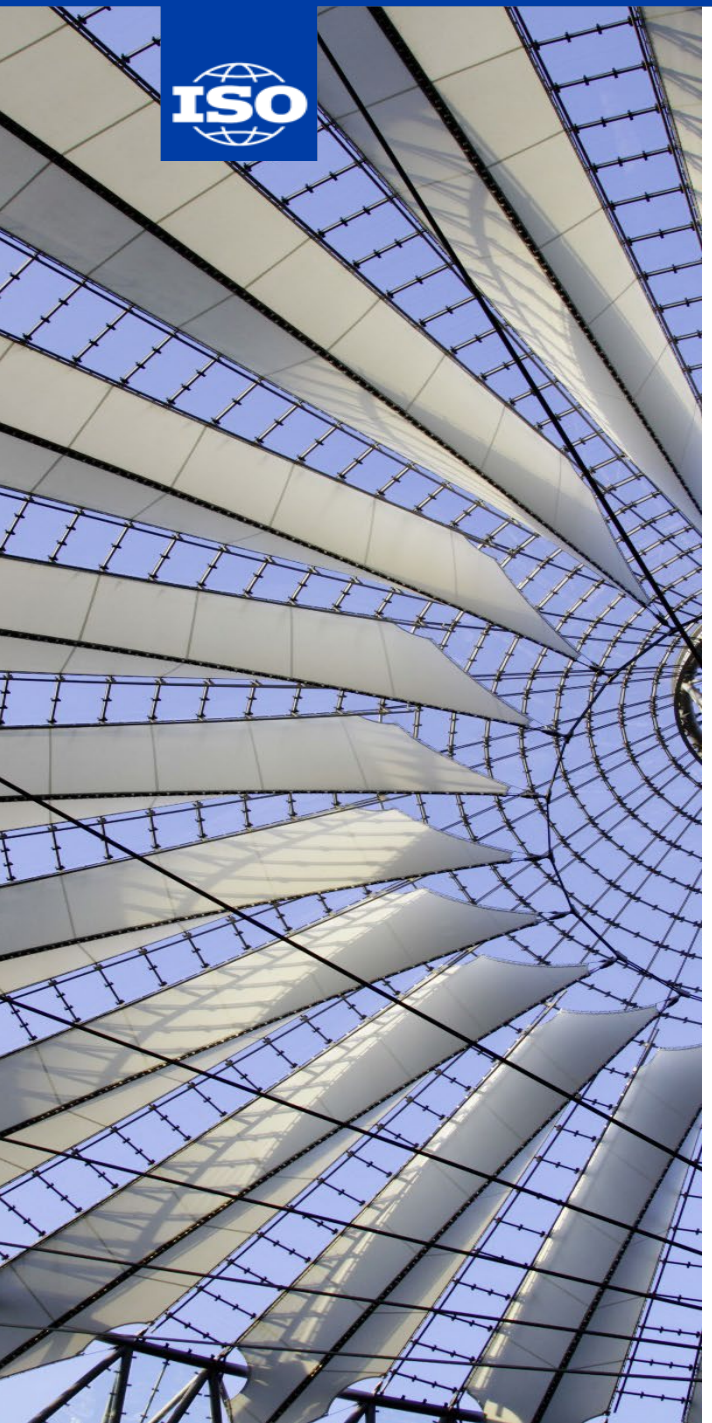


ISO 55001:2024

The Institute of Asset Management 30 YEARS 1994 - 2024

IAM WEBINAR

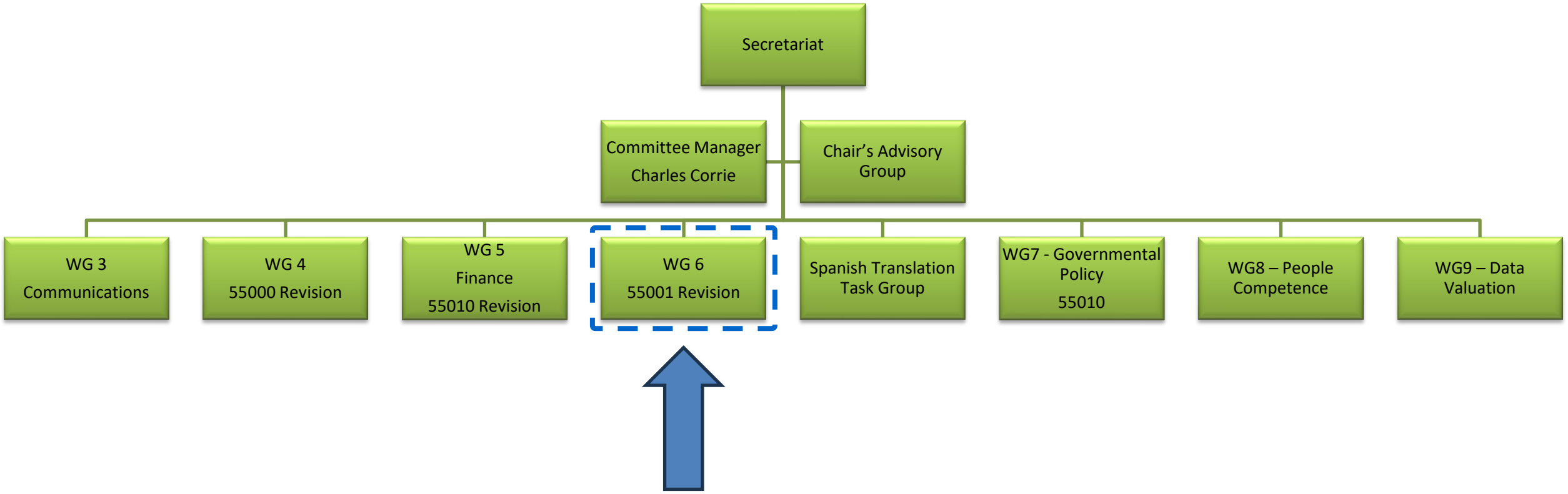
Martin Kerr

ISO55001:2024
(Why, What and How)

13 August 2024

TIMES
01:00 PT
04:00 ET
09:00 BST

TC251 Structure



Thank You

Dick Hortensius
Secretary/Deputy Convenor for WG6 (55001)
JTCG and sounding board for all things MSS-related

Annemarie Kin
Deputy Convenor for WG6 2021 through 2022
Before taking over as WG4 (55000) Convener

And to all the Theme and Sub-Team leads and everyone who participated in > 100 meetings across 3 years

Code of Conduct

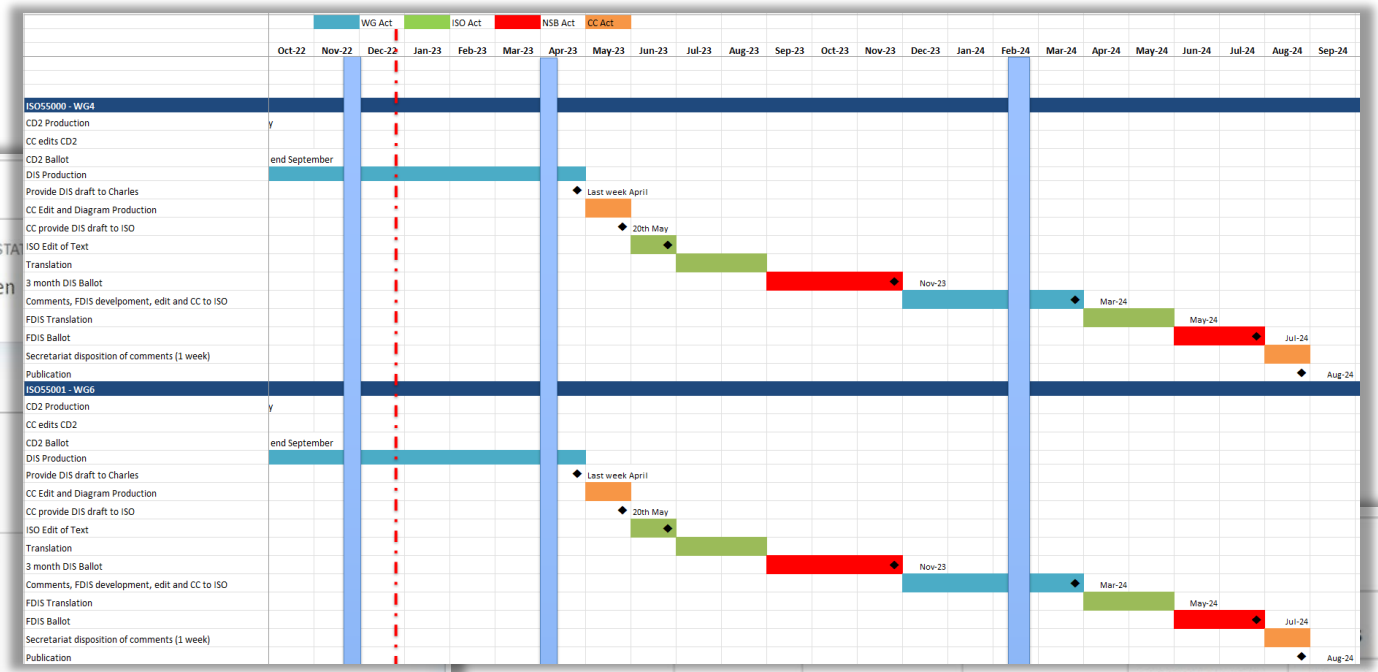
The code is applicable to all participants in ISO's activities

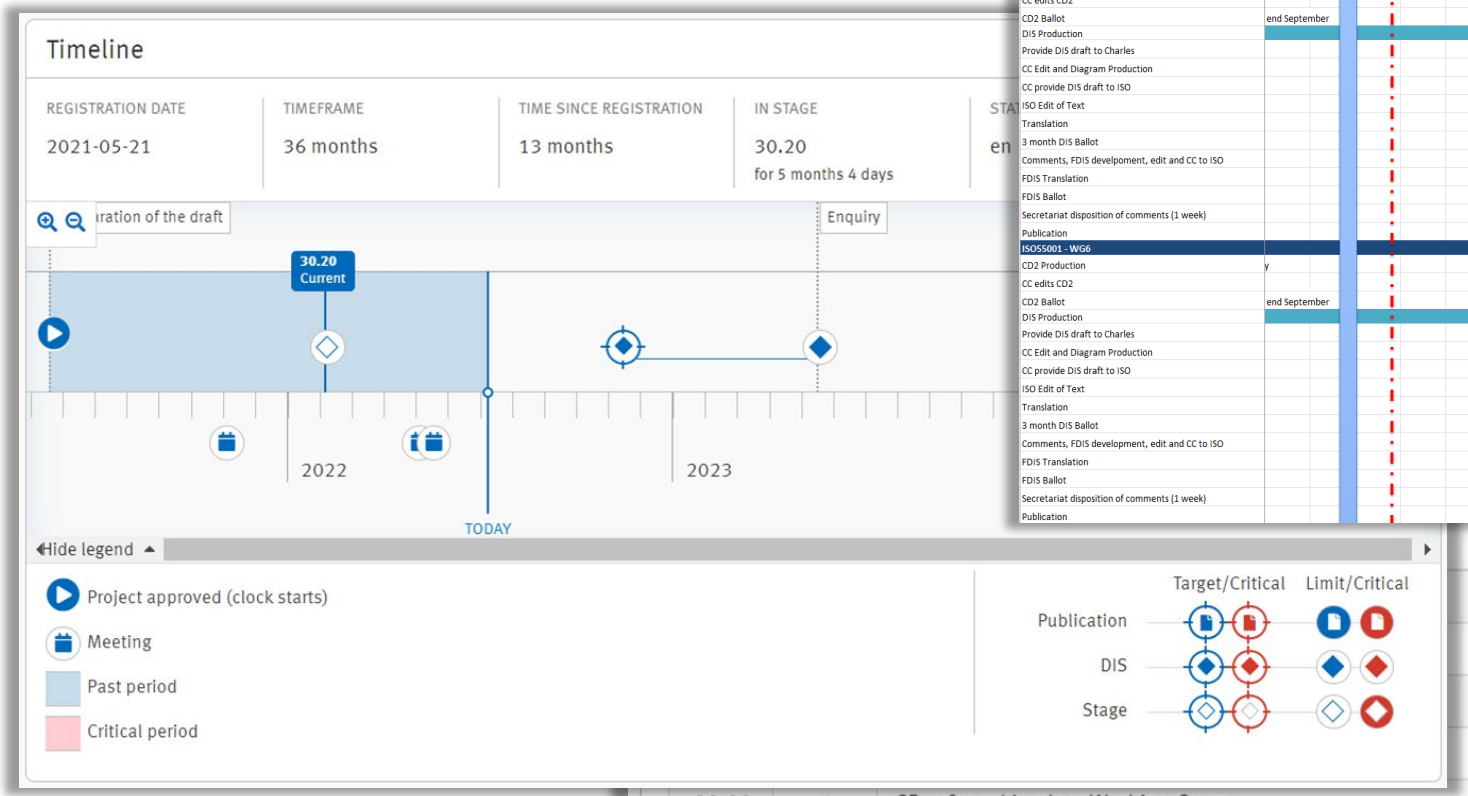
General Principles:

- **Comply with legal and statutory obligations**
- **Perform and act in good faith, consistent with the purpose, policies and principles of the organization**
- **Behave ethically**
- **Promote and enable all voices to be heard**
- **Engage constructively in ISO activities**
- **Declare actual and potential conflicts of interest and manage them appropriately**
- **Protect confidential information**
- **Protect ISO assets**
- **Avoid and prevent any form of bribery or corruption**
- **Escalate and resolve disputes and uphold agreed resolution**

The code can be downloaded from: PUB100011.pdf (iso.org)

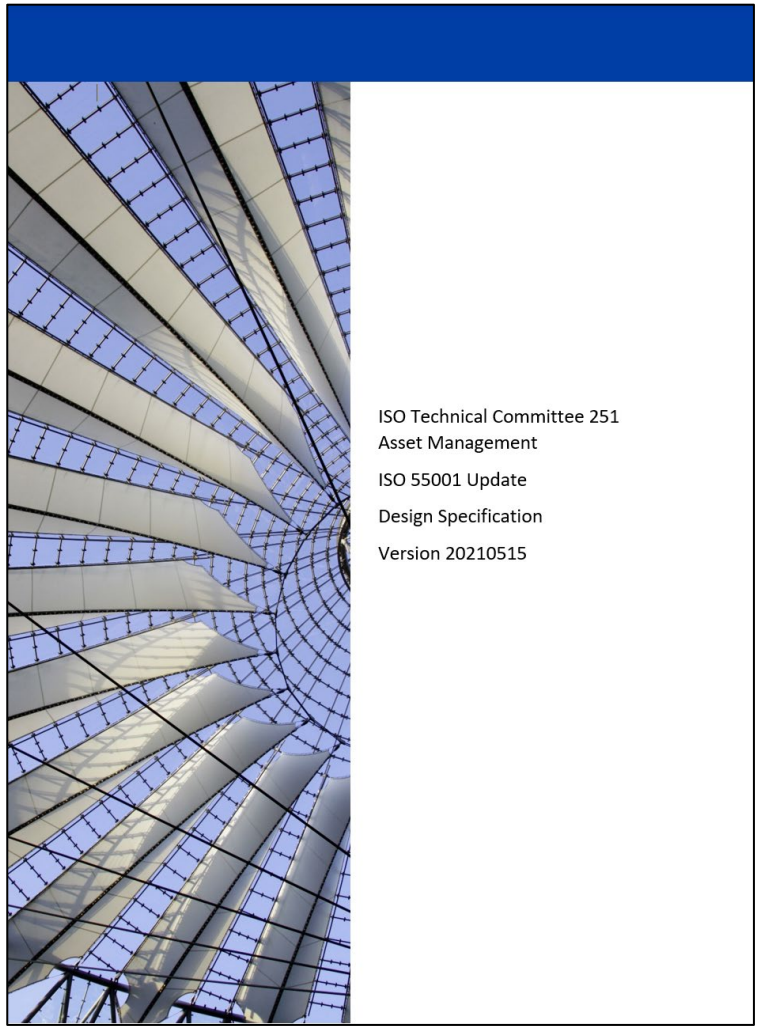
Project Management – ISO Timeline



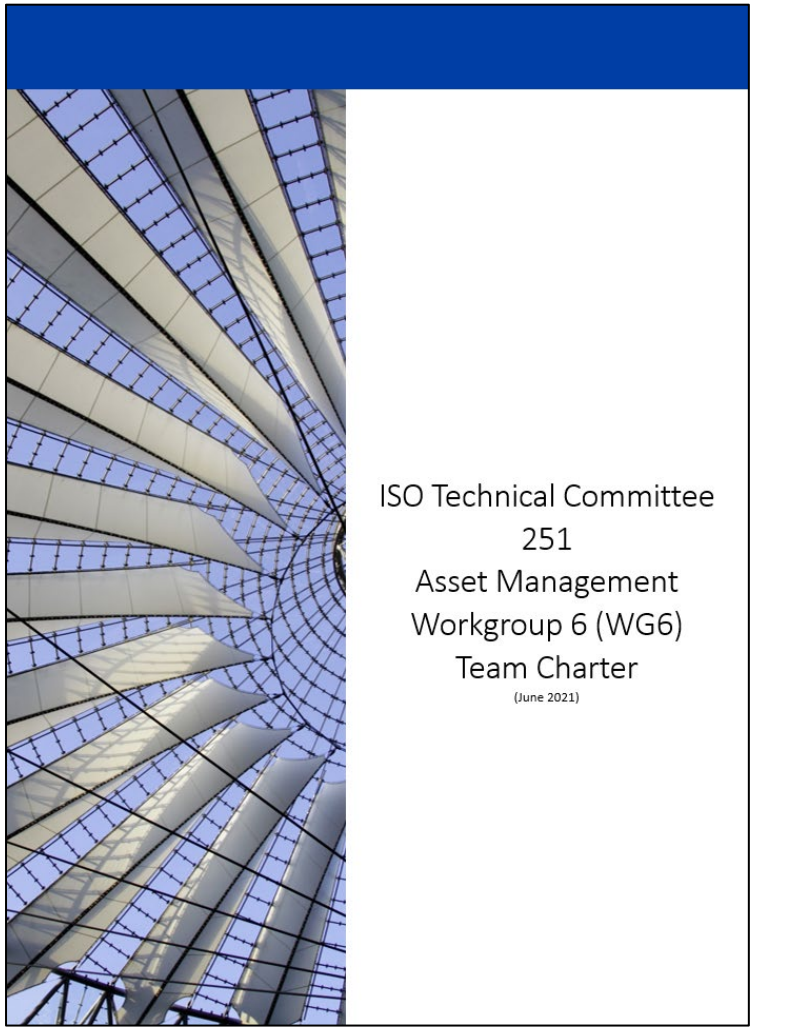


					2021-05-21	Closed
					2021-05-21	Closed
			2021-12-31		2022-02-07	Closed
					2022-02-07	**Current**
						Awaiting
30.92	1	CD referred back to Working Group				Awaiting
30.99	1	CD approved for registration as DIS				Awaiting
40.00	1	DIS registered		2022-11-15	2023-05-21	Awaiting
50.00	1	Final text received or FDIS registered for formal approval				Awaiting
60.60	1	International Standard published		2024-02-15	2024-05-21	Awaiting

WG6 55001 Design Spec & Team Charter



- Purpose
- Protocols
- Why
- What
- How
- Who
- When



Inputs → Themes → Discussions → NWIP

- Design Specification
- WG4 register
- HLS inputs from WG6
- Asset Register (WG5)
- ISO 55002 discussions
- ISO 55011
- ISO 55010
- Nanjing Themes
- AHG papers
- Other
- PIPs

Themes

Themes

Theme 1: Cluster of: Value, Stakeholders, Decision Making (Criteria, Process,…). Sustainability, Finance, Compliance	Annemarie Kin
Theme 2: Risk	Mattias Androls
Theme 3 Life cycle management	Bob Smith
Theme 4 Scope of the standard (context, intangible assets, scalability and Implementation)	Tom Carpenter
Theme 5: SAMP	Ton van Wingerden
Theme 6: Knowledge and information management	Navil Shetty
Theme 7: Leadership and people	João Lafraia

Dick Hortensius to align all MSS's with ISO55001
Opportunities to be assessed

Theme 8: SDG's
Theme 9: Life cycle management

Align with ISO 55000

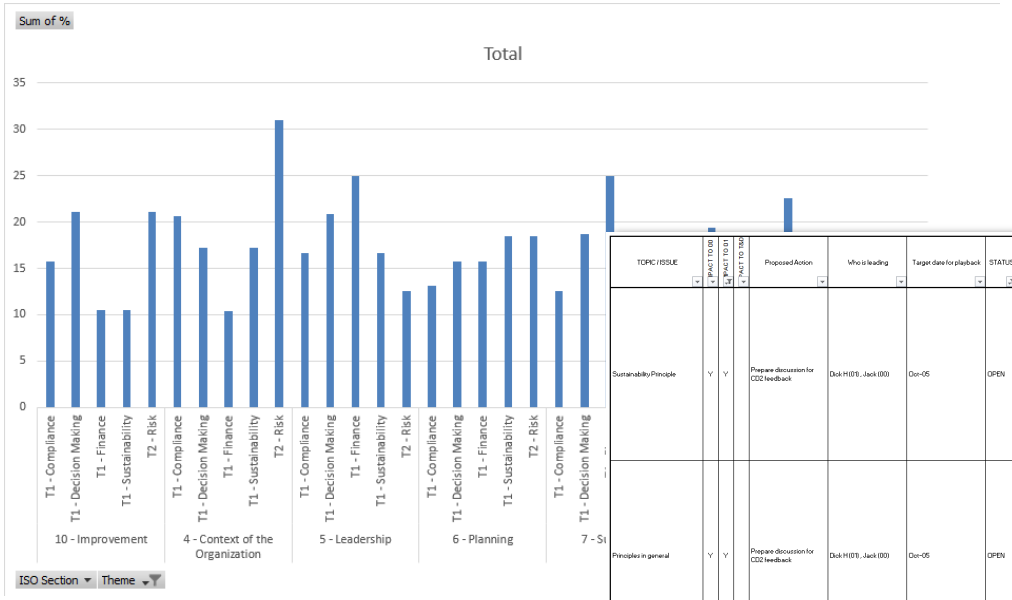
NWIP ISO 55001

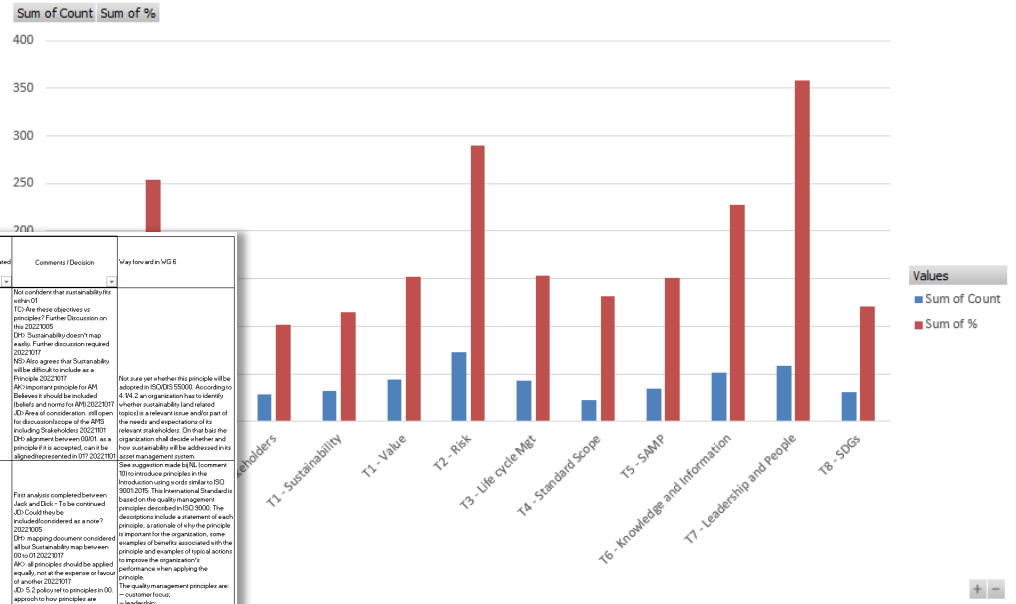
HLS
Main text and guidance

Theme Leads

Theme	Theme Lead (s)
Theme 1: Value and Decision Making	John Woodhouse (UK)
Theme 2: Risk	Mattias Androls (SE) and Tom Carpenter (AU)
Theme 3 Life cycle management	Bob Smith (US)
Theme 5: SAMP	Carrie Heishman (US)
Theme 6: Knowledge and information management	Navil Shetty (UK/IN)
Theme 7: Leadership and people	João Lafraia (BR)

Themes to HS Correlation





TOPIC / ISSUE	[PACT TO 00]	[PACT TO 01]	[PACT TO ISO]	Proposed Action	Who is leading	Target date for playback	STATUS	Lasre Updated	Comments / Decision	Way forward in WG 6
Sustainability Principle	Y	Y		Prepare discussion for C02 feedback	Dick H (01), Jack (00)	Oct-05	OPEN	31/10/2022	Not confident that sustainability fitz within 01 TC: Are these objectives vs principles? Further Discussion on this 20221005 DH: Sustainability doesn't map easily. Further discussion required 20221017 NS: Also agrees that Sustanability will be difficult to include as a Principle 20221017 AK: important principle for AMS Believes it should be included (beliefs and norms for AMS 20221017 JD: Area of consideration, still open for discussion/scope of the AMS including Stakeholders 20221101 DH: alignment between 00/01, as a principle if it is accepted, can it be aligned/represented in 01? 20221101	Not sure yet whether this principle will be adopted in ISO/DIS 55000. According to 4.Wi.2 an organization has to identify whether sustainability (and related topics) is a relevant issue and/or part of the needs and expectations of its relevant stakeholders. On that bas the organization shall decide whether and how sustainability will be addressed in its asset management system.
Principles in general	Y	Y		Prepare discussion for C02 feedback	Dick H (01), Jack (00)	Oct-05	OPEN	31/10/2022	First analysis completed between Jack and Dick - To be continued JD: Could they be included/considered as a note? 20221005 DH: mapping document considered all but Sustainability map between 00 to 01 20221017 AK: all principles should be applied equally, not at the expense or favour of another 20221017 JD: 5.2 policy ref to principles in 00, approch to how principles are recognised in 01. Prev mapping table from DH 20221101	See suggestion made by NL (comment 10) to introduce principles in the Introduction using words similar to ISO 9001:2015: This International Standard is based on the quality management principles described in ISO 9000. The descriptions include a statement of each principle, a rationale of why the principle is important for the organization, some examples of benefits associated with the principle and examples of typical actions to improve the organization's performance when applying the principle. The quality management principles are: – customer focus; – leadership; – engagement of people; – process approach; – improvement; – evidence-based decision making; – relationship management.
AMS Definition	Y	Y		Working group discussion	Tom C (01), Jack (00)		OPEN	17/10/2022	Figure new TC: something for meeting 3 of 4 20221005 TC: Paper provided to discuss AMS 20221017 AK: Management vs Management System discussion ("Activities" are a sub-part of "process" - based management is planning, organizing, coordinating/steering, controlling ALL activities related to asset to generate value, not only "coordinating management activities") 20221017 DH: "management system for asset management" (as original PIP19) 20221017 NS: Interacting elements / toolkit w	To be discussed on 28 December

4 - Context	5 - Leadership	6 - Planning	7 - Support	8 - Operati			
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		1	1				2
8	9	14	6	7	10	7	

				Description					Mitigation / Control		
				cription of Risk or Opportunity	Description of Impact	Likelihood Rating	Impact Rating	Priority Rating	Preventative Actions	Action Resource	Action Date
				many people on one Theme / take too long	Delays in review	3	2	6	Survey to identify preferences to distribute the workload	N/A	31/05/2021
				er subscription to different mes	results in abandoning a theme or delay in the review	3	2	6	Keep engagement and communication active	N/A	Ongoing
				sting time in ideas that is dy covered by an existing ndard	Delays in review	3	3	9	Re align thinking and understanding on what the 00/01 review is about	Martin Kerr	Ongoing
				sting time in ideas that is dy covered by an exisiting ing group	Delays and possible frustration between stakeholders	3	3	9	Re align thinking and understanding on what the 01 review is about	Martin Kerr / Jack Demsey	Ongoing
				sting time in definitions that e already been accepted by 51 (and other stakeholders)	Delays and possible frustration between stakeholders	3	3	9	Re align thinking and understanding on what the 01 review is about leverage the process of and definition liason between WG4 (Value meeting held and majority agreed to keep as is)	Martin Kerr / Jack Demsey	Ongoing
6	5/06/2021	Martin Kerr	Martin Kerr	Master document becomes overwehlming and complex	Results in loss of configuration and/or corruption of working file	3	2	6	Have a dedicated role to manage the master version of 55001 (CS has the baseline doc from DH 20210803)	Colin Sheldon	16/06/2021
7	7/07/2021	Martin Kerr	Martin Kerr	The use of specific nouns that may be relevant today (ie technologies) that may not be around in the future	This would make the standard timebound and unscalable. Need to construct any shalls weary of this	2	3	6	Discuss the use of "in principle" statements that avoid the use of closed nouns. Look to the definition SMEs to assist	Martin Kerr	Ongoing
8	7/07/2021	Jack Demsey	Martin Kerr	Opportunity to use the Integrity Team to keep WG4 and WG6 aligned in scope and purpose	Opportunity to keep things moving forward. We would invite expereienced PC/TC SMEs to play a role in this team	4	2	8	Prevents reinventing previously discussed items	Martin Kerr & Jack Dempsey	19/07/2021
9	16/07/2021	Navil Shetty	Martin Kerr	WG4 needs to introduce several knowledge & information management concepts (preferably in an Annex of 55000) for which requirements are being developed in 55001	If the concepts are not introduced in 55000 then requirements in 55001 will not be properly understood.	2	3	6	Early discussion and agreement with WG4 (NS has shared 20210810 for discussion)	Martin Kerr & Jack Dempsey	31/08/2021
10	16/07/2021	Navil Shetty	Martin Kerr	Several additions/enhancements being considered in Clause 7.5, which need early agreement within WG-6	Could lead to wasted effort	3	2	6	Early discussion within WG-6 (NS has shared 20210810 for discussion)	Martin Kerr	31/08/2021
11	16/07/2021	Navil Shetty	Martin Kerr	New sub-clause on Knowledge is being considered, which needs agreement within WG-6 and TC251	Could lead to wasted effort	3	2	6	Early discussions within WG-6 (NS has shared 20210810 for discussion)	Martin Kerr	31/08/2021
12	16/07/2021	Annemarie Kin	Martin Kerr	The core messages of themes are hard to attach to specific requirements	no real improvement of 01 can be realised	3	3	9	close contact with standard experts (Dick, Charles) what can be created within obligatory structures?	Annemarie Kin	Ongoing
13	11/08/2021	Charles Corrie	Martin Kerr	Core team member not being able to continue participating, due to becoming infected by COVID or other illness, or having job changes	Loss of contact and/or fall behind in the discussion and become disengaged in the review process	1	2	2	Monitor the wellbeing of the team and reach out when required to share information	Martin Kerr / Annemarie Kin	Ongoing

Annex SL text

High level structure and identical text for MSS and common core MS terms and definitions

1. Scope
2. Normative references
3. Terms and definitions
4. Context of the organization
5. Leadership
6. Planning
7. Support
8. Operation
9. Performance evaluation
10. Improvement

- Application of HS: refer Annex SL clause 8
- Type A MSS shall apply the harmonized structure detailed in Appendix 2.
- If due to exceptional discipline specific circumstances, text from the harmonized structure cannot be applied in the management system standard, then the committee may request an amendment the text.
- Discipline-specific text shall not affect harmonization or contradict or undermine the intent of the harmonized structure.

Example ‘blue text’ ISO 55001:2014

4 Context of the organization

4.1 Understanding the organization and its context

The organization shall determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcome(s) of its asset management system.

Asset management objectives, included in the strategic asset management plan (SAMP), shall be aligned to, and consistent with, the organizational objectives.

4.2 Understanding the needs and expectations of stakeholders

The organization shall determine:

— the ~~interested parties~~ stakeholders that are relevant to the asset management sy

— the ~~relevant~~ requirements and expectations of these ~~interested parties~~ stakeholders with respect to asset management;

— the criteria for asset management decision making;

— the stakeholder requirements for recording financial and non-financial information relevant to asset management, and for reporting on it both internally and externally.

SAMPLE ONLY

Example of impact of changes in HS on ISO 55001:2014

4 Context of the organization

4.1 Understanding the organization and its context

The organization shall determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended ~~outcome~~result(s) of its asset management system.

Asset management objectives, included in the strategic [illegible]agement plan (SAMP), shall be aligned to, and consistent with, the organizational objectives.

SAMPLE ONLY

4.2 Understanding the needs and expect[illegible] stakeholders

The organization shall determine:

— the ~~interested parties~~ stakeholder[illegible] relevant to the asset management system;

— the ~~relevant~~ requirements and expec[illegible]tions of these ~~interested parties~~ stakeholders with respect to asset management;

— which of these requirements will be addressed through the asset management system;

— the criteria for asset management decision making;

— the stakeholder requirements for recording financial and non-financial information relevant to asset management, and for reporting on it both internally and externally.

55001 Guiding Principles

What does good like? (**G**uidelines)

G1 - Less is more (what is the least we can add to 00/01 to get the most benefit for industry?)

G2 - Consider organizations who are new to 550xx (changes may turn them away from ISO?)

G3 - Consider organizations that are already certified to 550xx (will they stay with the 2014 version?)

G4 - Consider an auditor of 55001 and how they will audit against “shalls” (i.e. remove ambiguity and provide clarity)

G5 - Shall statements are “outcome” worded, not “detailed” worded

G6 - This is a management system standard (MSS) for asset management, not the management of assets.

G7 - This is not how to do asset management

G8 – It should also allow a small organization to apply the standard (maintain scalability)

Alignment of 00 and 01 Meetings (Nov 23 – Jan 24)

ISO/TC 251/WG 4 Registration deadline 02 Nov 2023 23:00 - 23:59 CET	**ISO/TC 251/WG 6** Registration open 21 Nov 2023 21:00 - 23:00 CET	**ISO/TC 251/WG 4** Registration open 04 Jan 2024 12:00 - 13:00 CET
ISO/TC 251/WG 4 Registration deadline 07 Nov 2023 12:00 - 13:00 CET	**ISO/TC 251/WG 4** Registration open 30 Nov 2023 23:00 - 23:59 CET	**ISO/TC 251/WG 6** Registration open 09 Jan 2024 11:00 - 13:00 CET
ISO/TC 251/WG 6 Registration deadline 08 Nov 2023 12:00 - 14:00 CET	**ISO/TC 251/WG 4** Registration open 05 Dec 2023 12:00 - 13:00 CET	**ISO/TC 251/WG 4** Registration open 09 Jan 2024 23:00 - 23:59 CET
ISO/TC 251/WG 3 Registration open 09 Nov 2023 07:00 - 08:00 PST	**ISO/TC 251/WG 6** Registration open 07 Dec 2023 11:00 - 13:00 CET	**ISO/TC 251/WG 4** Registration open 11 Jan 2024 23:00 - 23:59 CET
ISO/TC 251/WG 4 Registration open 16 Nov 2023 23:00 - 23:59 CET	**ISO/TC 251/WG 4** Registration open 19 Dec 2023 12:00 - 13:00 CET	**ISO/TC 251/WG 4** Registration open 16 Jan 2024 12:00 - 14:00 CET
ISO/TC 251/WG 4 Registration open 21 Nov 2023 12:00 - 13:00 CET	**ISO/TC 251/WG 6** Registration open 19 Dec 2023 21:00 - 23:00 CET	**ISO/TC 251/WG 6** Registration open 16 Jan 2024 21:00 - 23:00 CET

Rio

FDIS

High Level - Changes

- 4.5 Asset management decision-making and value (new)
- 6.1.2 Actions to address risk (new)
- 6.1.3 Actions to address opportunities (new)
- 6.2.1 Strategic asset management plan (new)
- 6.2.2 Asset management objectives (revised)
- 6.2.3 Planning to achieve asset management objectives (revised)
- 7.6 Data and information (new)
- 7.7 Knowledge (new)
- 8.1 Operational planning and control including life cycle management (revised)
- 8.3 Externally provided processes, products, technologies and services (revised)
- 9.3 Management review (revised)
- 10.3 Predictive action (new)

1-Scope

- Added are the intended results of the application of an asset management system. This is in line with the Harmonized Structure and the intended results are an important reference for determining risks and opportunities (see 6.1.1) that need to be addressed to give assurance that the asset management system can achieve the intended results.

- The intended results include:
  - realized value from assets throughout their life for the organization and its stakeholders;
  - achievement of asset management objectives and fulfilment of applicable requirements;
  - continual improvement of asset management, the asset management system and the performance of assets.

2-Normative References & 3-Terms and Definitions

2. Normative references

- Reference is made to the revised ISO 55000:2024

3. Terms and definitions

- This clause is new and includes the (mandatory) common terms and definitions related to management systems from the Harmonized Structure. In addition two definitions are included (**preventive action** (3.18) and **incident** (3.19)) because these are relevant for understanding subclause 10.2. All asset management (system) specific terms and definitions are included in ISO 55000:2024. Particularly important for ISO 55001:2014 are the new/revised definitions of **value** and **predictive action**, as well as data, information and knowledge.

4-Context of the organization

4.1 Understanding the organization and its context

The new requirement for the Harmonized Structure states that the organization shall determine whether climate change is a relevant issue. For more information on this topic, see the article on the JTCG website.

4.2 Understanding the needs and expectations of stakeholders

Included are two new requirements:

- The organization shall determine which identified stakeholder requirements will be addressed in the asset management system:
- The organization shall determine the impacts of assets and asset management activities on stakeholders.

This clarifies that it is the responsibility of the organization to determine which needs and expectations from stakeholders will be taken into account in the AMS, and that the organization itself shall determine impacts on stakeholders that may need to be addressed in the AMS .

4-Context of the organization

4.3 Determining the scope of the asset management system

No substantial changes

4.4 Asset management system

No substantial changes. The former requirement to develop a SAMP is now addressed in the new subclause 6.2.1.

4.5 Asset management decision-making

This subclause is new and specifies the establishment and application of a framework for asset management decision-making, definition of the criteria to be used for asset management decision-making and the selection of appropriate methods, processes and tools.

This is a significant change compared to the 2014 edition and contributes to strengthening the alignment of asset management from the strategic to the operational level (‘line of sight’) as well as consistent decision-making aimed at realizing value from assets while taking into account the context, stakeholder requirements and risks and opportunities.

5-Leadership

5.1 Leadership and commitment

No substantial changes

5.2 Asset management policy

No substantial changes; shortened

5.3 Roles, responsibilities and authorities

No substantial changes; shortened

6-Planning

6.1 Actions to address risks and opportunities

Actions to address risk and opportunities are now dealt with in two separate subclauses. This acknowledges that risks and opportunities are dealt with differently in most organizations and not always seen as antagonisms.

The risk assessment process is specified in some more detail by lifting text from 6.2.2 in ISO 55001:2014 to 6.1.2 in this new edition.

6-Planning

6.2 Asset management objectives and planning to achieve them

A new subclause 6.2.1 is introduced that requires the development of the Strategic Asset Management Plan (SAMP) and specifies what it should include and bring about.

This acknowledges the importance of the SAMP as element of the AMS and the key role of the SAMP in alignment of asset management with general organizational objectives and policies and the realization of value of assets for the organization and its stakeholders.

The requirements related to asset management objectives (6.2.2) and planning to achieve those objectives (6.2.3) are not substantially changed.

According the Harmonized Structure a new subclause 6.3 on planning changes is introduced addressing the determination of the need for changes, assessing associated risks and carrying out changes in a planned manner. Control of planned changes is still dealt with in subclause 8.2. This acknowledges the increasing importance of change management in organizations due to continuing developments and changes in the internal and external context of organizations that should be reflected in asset management as well as.

7-Support

7.1 resources

No substantial changes

7.2 competence

An additional requirement is introduced on periodic competence assessments to validate whether required competencies are still valid.

7.3 awareness

No substantial changes

7.4 communication

New requirements are included related to stakeholder consultation on communication needs the evaluation of the effectiveness of communications, and the maintenance of appropriate documented information.

7-Support

7.5 documented information

No substantial changes (this subclause was numbered as 7.6 in the 2014 edition)

7.6 data and information

No substantial changes (this subclause was numbered as 7.5 in the 2014 edition)

The requirements are clearer and more concise.

7.7 knowledge

This is a new subclause that is requiring that the organization determines the knowledge needed to operate the AMS, implements processes for dealing with knowledge and ensuring that knowledge remains current and reflects changing requirements and trends.

Together with 7.6 this reflects the growing importance of data, information and knowledge in asset management.

8-Operation

8.1 Operational planning and control including life cycle management

This subclause now addresses explicitly life cycle processes (creation, acquisition, utilization, maintenance, improvement, renewal, and disposal of assets). Also treating risks and implementing opportunities as identified in 6.1 are integral part of operational planning and control. Finally a requirement on documented information is introduced.

8.2 Control of change

No changes. Requirements related to planning changes are now moved to the new subclause 6.3

8.3 Externally provided processes, products, technologies and services

The term outsourcing has changed to externally provided processes, products, technologies and services in line with the Harmonized Structure. The requirements are not changed substantially.

9-Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

No substantial changes

9.2 Internal audit

No substantial changes

9.3 Management review

No substantial changes

10-Improvement

10.1 Continual improvement

No substantial changes (this subclause was numbered 10.3 in the 2014 edition)

10.2 Nonconformity and corrective action

No substantial changes (this subclause was numbered 10.1 in the 2014 edition)

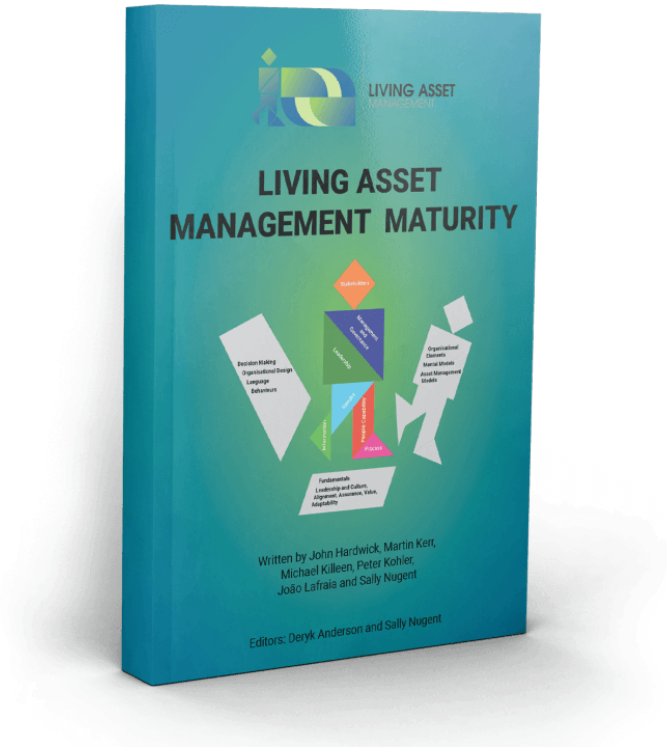
Preventive actions are now explicitly included alongside corrective actions. Preventive actions were already implicitly present in the 2014 edition (..action and available options to eliminate the cause(s) of the nonconformity or incident, in order that it does not recur or occur elsewhere…).

10.3 Predictive action

This is a new subclause replacing the subclause on preventive action (10.2 in the 2014 edition). This subclause requires the organization to establish processes for predictive actions, i.e. actions that predict future behaviour of a parameter required to support decision-making. This should enable an organization to better anticipate and act on future occurrences and impacts of non-conformities and opportunities for improvement and determine optimal intervention points.

This reflects the increasing importance to plan for future developments that affect the continued realization of value from assets for the organizations and its stakeholders.

Thank You


LIVING ASSET
LIVING ASSET MANAGEMENT MATURITY
Written by John Hardwick, Martin Kerr, Michael Killeen, Peter Kohler, João Lafraia and Sally Nugent
Editors: Deryk Anderson and Sally Nugent